# SmartIntego Locking cylinder (Z4)

Manual

15.10.2024

SimonsVoss technologies

# Contents

## 1. Intended use

Digital SimonsVoss SI-Locking Cylinder are installed in designated door locks, such as DIN mortise locks, to integrate them into a digital locking system.

The digital SI-Locking Cylinder may only be used for its intended purpose in a designated door locking device. No other use is permitted.

Digital SI-Locking Cylinders are available in various lengths. The selection of the proper size is of significance. The length of the locking cylinder is printed on the packaging and can be measured at any time. If the cylinder is too short, the handles cannot be fitted. If the cylinder is too long, it may be ripped out of the locking device. The may not protrude more than 3 mm on each side of the door to ensure proper operation.

The product may not be changed in any way, other than in compliance with the changes described in the instructions.

## 2. General safety instructions

**Signal word: Possible immediate effects of non-compliance**
DANGER: Death or serious injury (likely)
WARNING: Death or serious injury (possible, but unlikely)
CAUTION: Minor injury
IMPORTANT: Property damage or malfunction
NOTE: Low or none

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| ⚠ | **WARNING** |
|---|---|

### Blocked access

Access through a door may stay blocked due to incorrectly fitted and/or incorrectly programmed components. SimonsVoss Technologies GmbH is not liable for the consequences of blocked access such as access to injured or endangered persons, material damage or other damage!

### Blocked access through manipulation of the product

If you change the product on your own, malfunctions can occur and access through a door can be blocked.

■ Modify the product only when needed and only in the manner described in the documentation.

### Do not swallow battery. Danger of burns from hazardous substances

This product contains lithium button cell batteries. Swallowing the button cell battery, in can result in severe internal burns leading to death in as little as two hours.

1. Keep new and used batteries away from children.
2. If the battery compartment does not close securely, cease using the product and keep it away from children.
3. If you think batteries have been swallowed or are in any part of the body, seek medical attention immediately.

### Risk of explosion due to incorrect battery type

Inserting the wrong type of battery can cause an explosion.

■ Only use the batteries specified in the technical data.

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| ⚠ | **CAUTION** |
|---|---|

### Fire hazard posed by batteries

The batteries used may pose a fire or burn hazard if handled incorrectly.

1. Do not try to charge, open, heat or burn the batteries.
2. Do not short-circuit the batteries.

**IMPORTANT**

### Damage resulting from electrostatic discharge (ESD) when enclosure is open

This product contains electronic components that may be damaged by electrostatic discharges.

1. Use ESD-compliant working materials (e.g. Grounding strap).
2. Ground yourself before carrying out any work that could bring you into contact with the electronics. For this purpose, touch earthed metallic surfaces (e.g. door frames, water pipes or heating valves).

### Damage resulting from liquids

This product contains electronic and/or mechanic components that may be damaged by liquids of any kind.

- Keep liquids away from the electronics.

### Damage resulting from aggressive cleaning agents

The surface of this product may be damaged as a result of the use of unsuitable cleaning agents.

- Only use cleaning agents that are suitable for plastic or metal surfaces.

### Damage as a result of mechanical impact

This product contains electronic components that may be damaged by mechanical impacts of any kind.

1. Avoid touching the electronics.
2. Avoid other mechanical influences on the electronics.

### Damage due to polarity reversal

This product contains electronic components that may be damaged by reverse polarity of the power source.

- Do not reverse the polarity of the voltage source (batteries or mains adapters).

### Operational malfunction due to radio interference

This product may be affected by electromagnetic or magnetic interference.

- Do not mount or place the product directly next to devices that could cause electromagnetic or magnetic interference (switching power supplies!).

### Communication interference due to metallic surfaces

This product communicates wirelessly. Metallic surfaces can greatly reduce the range of the product.

- Do not mount or place the product on or near metallic surfaces.

**NOTE**

### Intended use

SmartIntego-products are designed exclusively for opening and closing doors and similar objects.

- Do not use SmartIntego products for any other purposes.

### Malfunctions due to poor contact or different discharge

Contact surfaces that are too small/contaminated or different discharged batteries can lead to malfunctions.

1. Only use batteries that are approved by SimonsVoss.
2. Do not touch the contacts of the new batteries with your hands.
3. Use clean and grease-free gloves.
4. Always replace all batteries at the same time.

### Qualifications required

The installation and commissioning requires specialized knowledge.

- Only trained personnel may install and commission the product.

### Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Modifications or further technical developments cannot be excluded and may be implemented without notice.

The German language version is the original instruction manual. Other languages (drafting in the contract language) are translations of the original instructions.

Read and follow all installation, installation, and commissioning instructions. Pass these instructions and any maintenance instructions to the user.

## 3. Product specific safety notices

| | WARNING |
|---|---|
| ⚠ | **Escape door function malfunction** |

The use of unsuitable components or ones that are not ready for operation can impair the function of an escape door. If you use the anti-panic cylinder in non-approved locks, the escape door function may be impaired and cannot be released again.

1. Make sure that all parts of the lock are ready for operation.
2. Make sure that the panic function of the mortise lock is ensured.
3. Please refer to the documentation of the lock manufacturer.
4. Use the anti-panic cylinder within the specified temperature range.
5. Perform a function test after installing the anti-panic cylinder or changing its battery.

| | CAUTION |
|---|---|
| ⚠ | **Use of the anti-panic version of the locking cylinder in non-approved locks** |

If you use the anti-panic version of the locking cylinder in unauthorised locks, the escape door function may be impaired and cannot be released again.

1. Only use the anti-panic version of the locking cylinder in locks for which the locking cylinder is expressly approved.
2. Please refer to the documentation of the respective lock manufacturer.
3. Contact SimonsVoss Technologies GmbH for further information on this subject (see *Help and other information [▶ 45]*).

### Hand injuries from carrier springing back

A spring-loaded carrier is used in the anti-panic construction of the closing cylinder. This carrier can spring back when it is not installed, causing hand injuries.

 ⊞ Do not hold the anti-panic construction of the closing cylinders in the area of the carrier.

| IMPORTANT |
|---|

### Damage caused by moisture in outdoor use

Moisture can damage the electronics.

1. If you want to use the locking cylinder for outdoor applications or in high humidity (bathrooms or washrooms), use the WP version.
2. Carefully insert the locking cylinder to avoid damaging the O-rings.

### Mechanical damage to the thumb turn as a result of obstacles

If the thumb turn can knock against the wall or other objects as a result of the installation situation, it may become damaged.

▪ In such situations, use a suitable door stop.

### Mechanical damage to the thumb turn through misuse as door-opener

Some doors are very heavy and solidly constructed. The thumb turn is not suitable for opening such doors.

1. Don't pull the thumb turn to open doors.
2. Make suitable door openers available (suitable handles) to avoid misuse of the thumb turn.

### DoorMonitoring in gear locks

Door monitoring cylinders are not suitable for operation in multi-lock systems with gear (gear locking devices). Except: DM.AP2, without bolt monitoring.

▪ Do not use door monitoring cylinders in gear locking devices.

| NOTE |
| --- |
| **Maintenance interval of not more than one month for emergency exit locks** |
| As per European standard EN 179, Appendix C, all components in a locking device must be checked at intervals no greater than one month to ensure that they are in satisfactory working order as part of emergency exit locking device maintenance. |

### Locking up of persons without means of identification

The freely-rotating construction of the closing cylinder can only be opened with a means of identification from both sides.

▪ Ensure that no persons without means of identification are in the secured area.

### Length of locking system password

For security reasons, the locking system password must consist of at least 8 characters. The code length for digital closing cylinders *(and for System 3060/3061 and MobileKey)* corresponds to $2^{168}$ Bit.

### Fault in the interior knob due to moisture

The inner knob of the closing cylinder is of protection class IP40 and is thus not protected from moisture.

▪ Ensure that the interior knob cannot come into contact with water.

Battery changes may only be carried out by trained personnel and only with the intended battery key (Z4.SCHLUESSEL)!

### Programming with obsolete LSM version

New components can only be programmed with the current version of LSM.

### Difficulty of operation of the lock due to stiff latch or bolt

If the latch or bolt of the mortice lock are stiff, the closing cylinder will also be stiff.
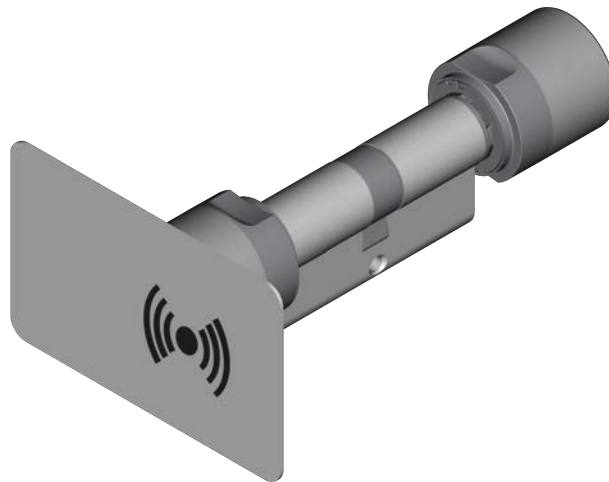
▪ Check that the latch or the bolt of the mortice lock are free-moving.

### Fitting error or incorrect order

If you make a mistake in measuring the door and order a closing cylinder, the closing cylinder will not fit.

▪ Check the dimensions of the door again before ordering.

# 4. General information on SmartIntego



## 4.1 Product description

Locking cylinders from the SmartIntego series can be integrated into existing locking systems.

### SI Wireless ONLINE

With Wireless Online, the SmartIntego components are wirelessly connected online. An electronic locking cylinder reads out the relevant card data and sends it wirelessly to a gateway. The gateway forwards the card data to the existing access control system. Once the access control system has successfully checked the card data, the access control system opens the door.
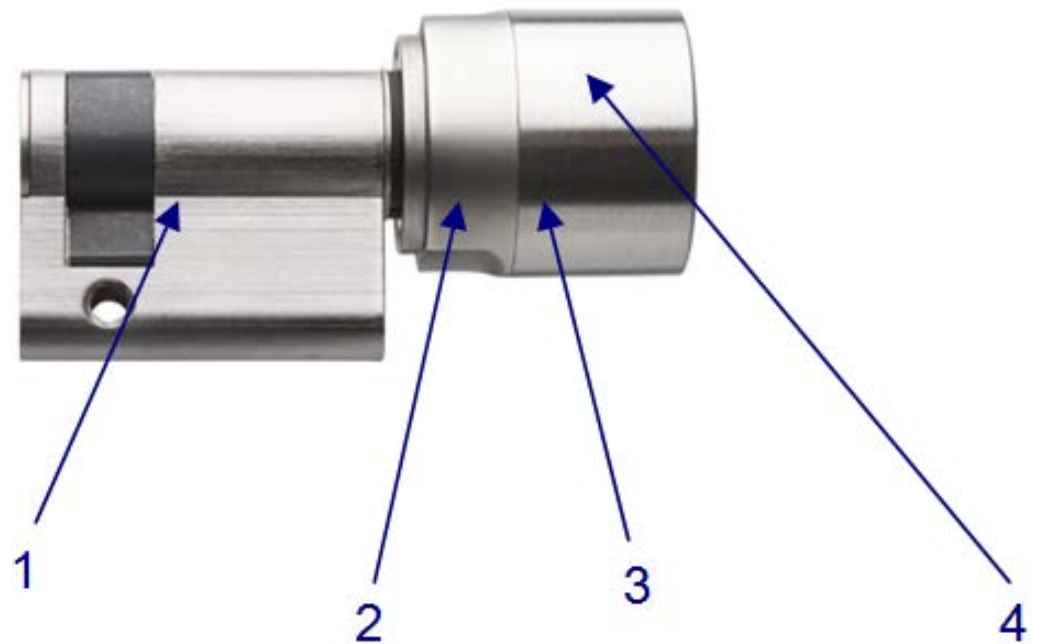
### SI Virtual Card Network

With SI Virtual Card Network, there is no direct radio connection via integrated LockNodes. New authorisations are programmed into the lock via cards booked at the booking terminal.

## 4.2 Locking cylinder design
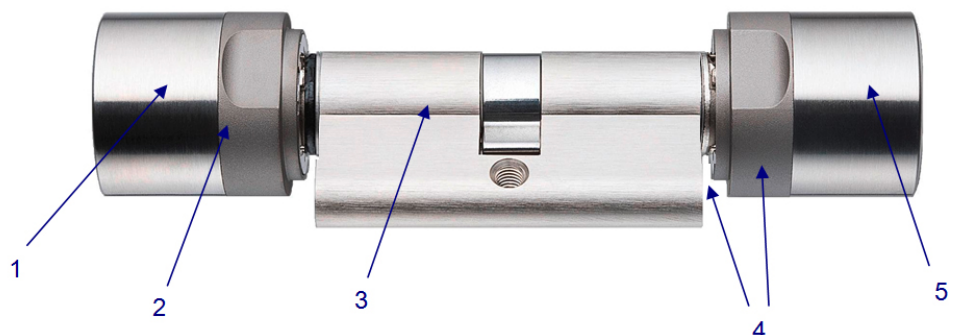
1. Inside thumb-turn
2. Batteries/electronics
3. Actuator
4. Drilling protection
5. Outer thumb-turn

## 4.3 Half cylinder design



1. Actuator
2. Electronics
3. Batteries
4. Thumb-turn

## 4.4 Opening and locking from the outside

### With freely rotating locking cylinders (FD)

The outer and inside thumb-turn rotate freely when not activated in the freely rotating SI-Locking Cylinder, meaning it is not possible to open or lock the door without a valid ID medium. Identify yourself with your valid ID medium on the outer thumb-turn to activate the cylinder. If the ID medium is authorised, an audible signal will sound twice, the blue LED will flash twice and the locking cylinder will engage ready to open. Turn the outer thumb-turn in the direction of locking or opening. You have about five seconds to do so. The engage time can be configured. A single audible

signal will then sound and the outer or inside thumb-turn will rotate freely again. Ensure that the outside or inside locking cylinder thumb-turn rotates freely again after the thumb-turn has been engaged ready for use.

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**NOTE**

If the user has an ID medium which is not authorised for use at that particular moment due to the time zone plan, a single audible signal will sound. The cylinder will not engage, so the outer or inside thumb-turn continues to rotate freely and the user cannot open the door. You need to configure this response separately in third-party systems.

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## 4.5  Opening and locking from the inner side

### With freely rotating locking cylinders (FD)

The outer and inside thumb-turn rotate freely when not activated in the freely rotating SI-Locking Cylinder, Doors can also only be opened or locked on the outside using an ID medium on the inside thumb-turn.

### With non-freely rotating locking cylinders (CO)

SI-Locking Cylinders which are permanently engaged for use can be operated from the inside without a ID medium. In this case, the door can be opened and closed using the inside thumb-turn without an authorised ID medium.

## 5. SmartIntego designs

Different versions of the digital locking cylinder are offered to cover the different needs of the market. The different versions are indicated by a code. The different versions can be combined:

| ABBREVIATION | ITEM | LOCKING CYLINDER | HALF CYLINDER |
|---|---|---|---|
| FD | Standard (freely rotating) | X | |
| HZ | Half cylinder | | X |
| CO | Comfort cylinder | X | |
| MS | Brass version | X | X |
| AP | Anti-panic function | X | |

Refer to the current product catalogue to see which particular versions can be combined with one another. Locking cylinders are also supplied in different profiles to satisfy differences in different regions:
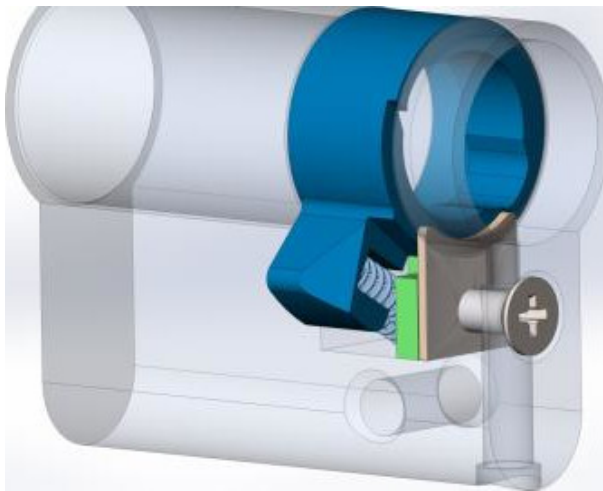
### 5.1 FD version (Standard)

SI-Locking Cylinder freely rotating on both sides.

The .FD double thumb-turn cylinder is available from a length of 30-30 mm.

### 5.2 HZ version (Standard)

The standard version of the half cylinder.

### 5.3 Half-cylinder (HZ) version (self-locking)





Variant of the half cylinder with self-locking by means of a spring-loaded catch with a fixed reset position. Due to the spring and the bevelled edge on the cam, locking is possible without an identification medium by pressing in (.SL). The main application is, for example, installation in swivel lever handles for switch and distribution cabinets or server racks in data centres.



The technical data differs slightly from the normal half cylinder:

| Angle driver position | 37º |
|---|---|
| Driver width from zero position | 11 mm |

If the self-locking mechanism is used frequently, it is advisable to apply a little grease to the engagement edge on the switch cabinet lever handle.

All known options for the half cylinder are possible with the following exceptions:

- .MR
- .MS
- .DK
- .WP

The usual lengths of half cylinders for lever handles are 30-10 mm and 35-10 mm.



## 5.4  MS version

The SI-Locking Cylinder can be supplied with stainless steel or brass colour finish (highly glossy thumb-turn covers).

### 5.5 AP version

A cylinder with an anti-panic function must be fitted to all doors where the lock's panic function may be adversely affected by the position of the cam. This version contains an integrated spring mechanism which places the locking cam in a non-critical position, meaning a panic lock's panic function cannot be blocked.

In contrast to all other cylinders, the .AP type cylinder is fitted the other way round with the thumb-turn containing the battery and the electronics module installed on the outside (see diagram).

Unlike the standard anti-panic cylinder (AP), the inside thumb-turn of which is permanently engaged, the inside thumb-turn for the freely-rotating AP version (AP.FD) is disengaged mechanically and cannot be engaged with an identification medium.
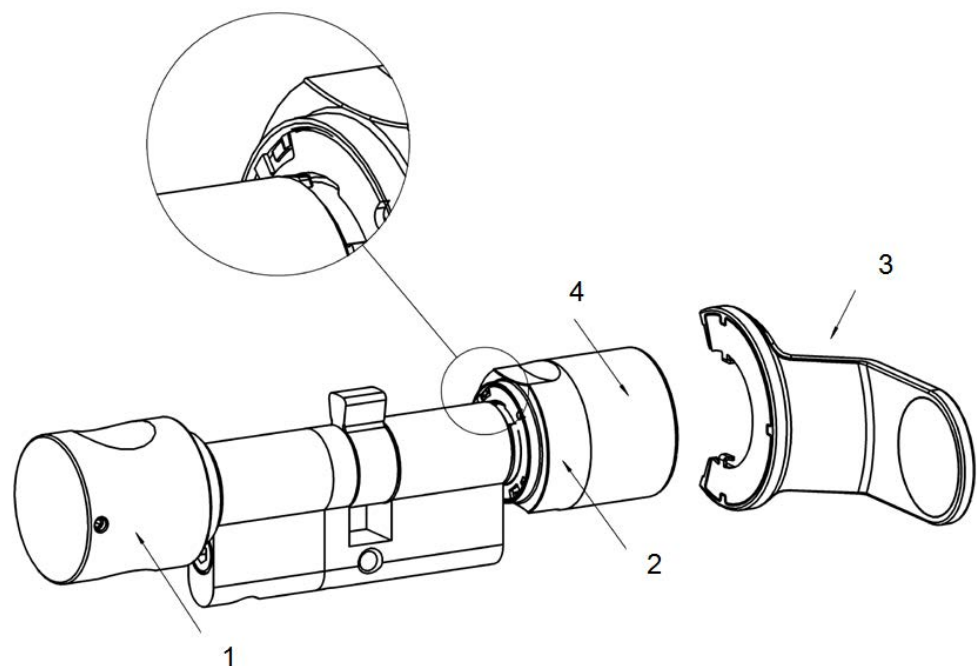


1. Inside thumb-turn
2. Recessed grip ring
3. Battery replacement key
4. Outside thumb-turn

The following aspects should be taken into consideration for doors along rescue routes which have been installed after April 1, 2003 (exit devices as per DIN EN 179 or DIN EN 1125): All SI-Locking Cylinder models may be used for all exit devices where their approval states that the SI-Locking Cylinder has no impact on the lock's function. The SI-Locking Cylinder type .AP

(anti-panic cylinder) must be used for all exit devices where the SI-Locking Cylinder cam position affects the lock's function. This must be stated in the lock manufacturer's approval.

**DANGER**

Due to the structural design of panic locks, it is not permitted to turn the SI-Locking Cylinder thumb-turn to the stop position when the door is locked since this may affect the lock's panic function.

## 5.6  CO version

In the comfort cylinder (CO), the inside knob is permanently interconnected with the locking cam, so that doors can be opened and locked from the inside without needing to use a transponder.

## 6. Installation guide for 'SmartIntego'

### 6.1 General instructions

When installing the digital , ensure that there are no sources of low-frequency radio interference in the surrounding area.

The profile cylinder housing should be fitted flush in outside areas; it should project a maximum of 3 mm and a profile cylinder escutcheon or security fitting should be installed if necessary. It is also important to ensure that no water is able to penetrate the cylinder via the cam section.

You must not strike the thumb turns when installing the cylinder.

All thumb turns are locked into place with a bayonet mount (exception: inside anti-panic thumb-turn version).

The inner side of the is laser-engraved with the letters IL for inside length on the profile cylinder housing; the electronics side is identifiable by the black plastic ring between the thumb turn and the profile cylinder housing.

Batteries are already installed before delivery.

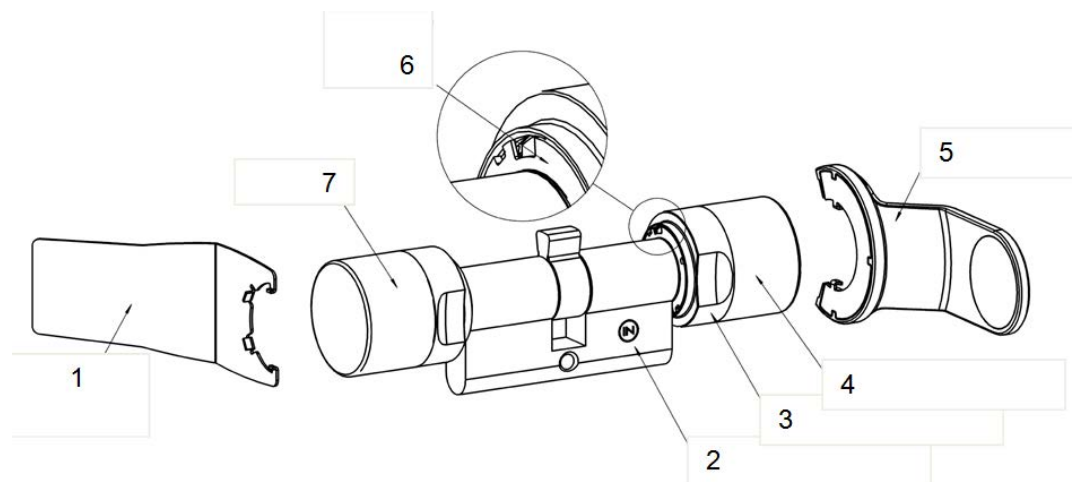All the tasks listed in this section can also be carried out using the installation/battery key.

### 6.2 Programming the locking cylinder

The digital must be programmed before installation. You can find more detailed information in the software operation instructions.

### 6.3 Installation variants

#### 6.3.1 Installation of double thumb-turn cylinders (except types .AP2)



1. Installation key
2. Side marking

3. Recessed grip ring
4. Inside thumb-turn
5. Battery replacement key
6. Locking disc with opening (identical on outside)
7. Outside thumb-turn

6.3.1.1 Removing the outside thumb-turn

Place the installation key on the outside thumb-turn in such a way that its two teeth engage into the outside thumb-turn; if necessary, turn the thumb-turn until both teeth lock into the locking disc.

> **NOTE**
>
> The installation tool must be placed flat on the inside front surface of the thumb-turn to ensure that the tool can lock into the locking disc.

Hold the outside thumb-turn firmly and carefully turn the installation tool about 30° in a clockwise direction (until you hear a click). Detach door thumb-turn.

6.3.1.2 Fastening the digital cylinder into the lock

Turn the cam until it is vertical and pointing downwards. Insert the digital locking cylinder through the lock in such a way that the inside thumb-turn (see diagram above) is facing the inner side of the door. Fasten the cylinder into the mortise lock with the fastening screw.

> **NOTE**
>
> You must not strike the thumb turns when installing the cylinder. Do not allow the cylinder to come into contact with oil, grease, paint or acids.

6.3.1.3 Fastening the outside thumb-turn

Replace the thumb-turn and turn in an anti-clockwise direction while applying slight pressure until the outer thumb-turn grips into the indents in the flange. Possibly place the thumb-turn in this position by pressing it towards the profile cylinder housing.

> **NOTE**

Turning the bayonet disc when not installed may prevent the thumb-turn from being fastened into position. In such a case, push the disc back into the original 'bayonet disc open' position using the installation tool. (see diagrams)
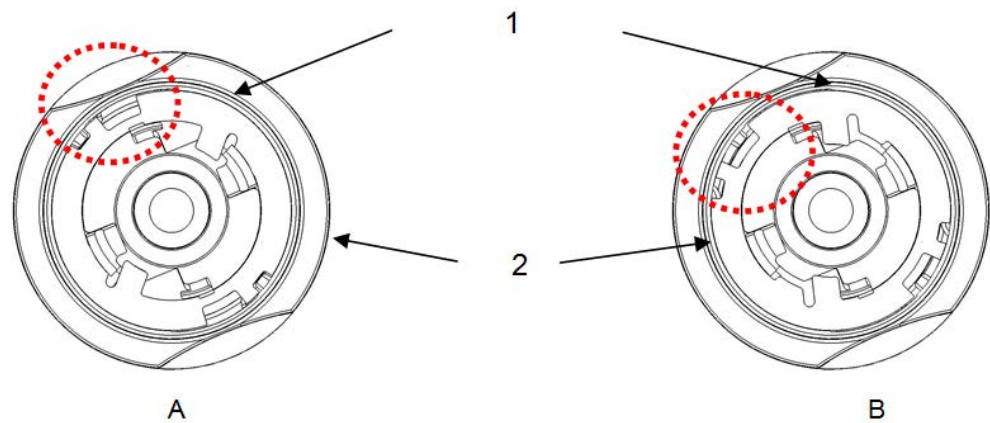


1. Bayonet disc
2. Knob
3. Bayonet disc closed
4. Bayonet disc open

Place the installation key on the outside thumb-turn in such a way that its two teeth engage into the outside thumb-turn; if necessary, turn the thumb-turn until both teeth lock into the locking disc. Lock the thumb-turn into position again by rotating it 30° in a clockwise direction.

6.3.1.4 Carry out a function test

1. Engage cylinder using a valid ID medium and turn the thumb-turn in both the locking and opening direction with the door open. The thumb-turn must be able to rotate easily when you do so.

2. Close the door and repeat the process. If the locking cylinder should be stiff, you need to align the door or modify the strike plate.

### 6.3.2 Fitting an anti-panic cylinder
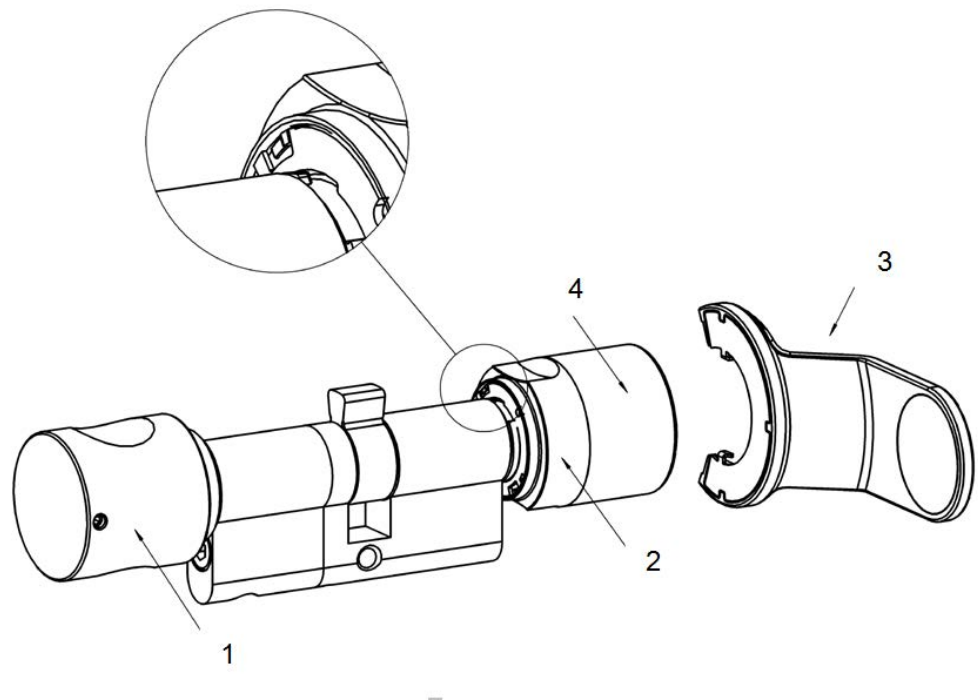


1. Inside thumb-turn
2. Recessed grip ring
3. Battery replacement key
4. Outside thumb-turn

The locking cam is always in a pre-defined position in the AP cylinder when disengaged. This prevents accidental blocking. Unlike other cylinder versions, the AP cylinder is installed the other way round (inserted into the lock from the inside to the outside).

#### 6.3.2.1 Removing the inside thumb-turn

Loosen the inside thumb-turn's threaded pin (see diagram above) using an Allen key (1.5 mm). Do not unscrew completely. Hold the cam firmly and then turn the inside thumb-turn anti-clockwise or, in the case of a freely rotating AP cylinder, remove the thumb-turn after loosening the threaded pin.

#### 6.3.2.2 Fastening the digital cylinder into the lock

Turn the cam until it is vertical and pointing downwards. Insert the digital locking cylinder through the lock from the outside in such a way that the outside thumb-turn is facing the outer side of the door. Fasten the cylinder into the mortise lock with the fastening screw.

> **NOTE**
>
> You must not strike the thumb turns when installing the cylinder. Do not allow the cylinder to come into contact with oil, paint or acids.

### 6.3.2.3 Fastening the inside thumb-turn

Screw the inside thumb-turn onto the thread until it locks into place as it comes up against the cam in the lock. Pull on the inside thumb-turn, or push on the inside thumb-turn of a freely rotating AP cylinder, until it locks into position. Fasten the threaded pin tightly using the Allen key (1.5 mm).

### 6.3.2.4 Functional test

■■ To verify that the AP2 cylinder functions correctly in an anti-panic lock, you must check that the cam moves easily and that the door opens correctly using the procedure described below.

■■ Carry out the functional test in the direction of escape.

■■ You must carry out a functional test whenever the cylinder or the fastening screw is repositioned.

■■ You will need an authorised identification medium to carry out the functional test.

■■ Withdraw the dead bolt before the functional test.
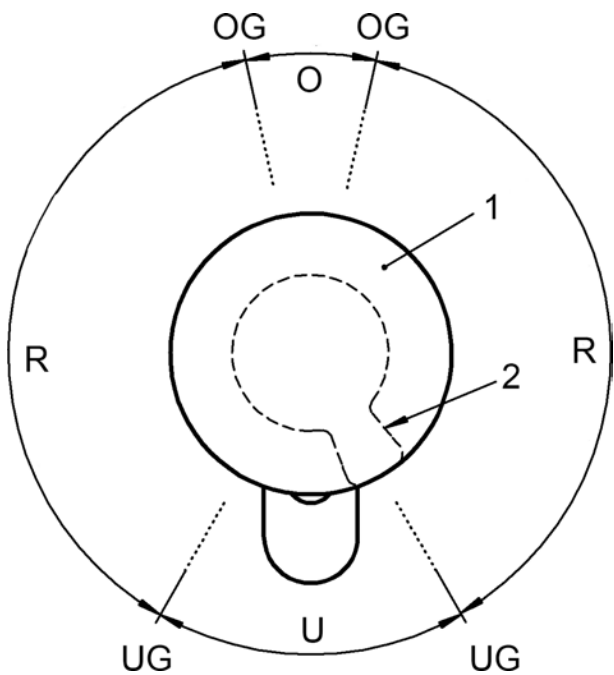


| U section: | No restore force on the cam |
|---|---|
| R section: | Restore force section towards U section |

| O section: | Top dead point in deadbolt throw - no restore force on the cam |
|---|---|
| OG: | Top threshold section |
| UG: | Lower threshold section |
| 1: | Thumb-turn |
| 2: | Cam position (concealed) |

1. With the cylinder engaged, first turn the thumb-turn in the direction of locking as far as the deadbolt throw in the 'R' section.
   ↳ You will feel the restore force. When you release the thumb-turn in this position, it must turn back to the 'U' section of its own accord.

2. Lock the locking device and check the restore force. To do so, turn the engaged thumb-turn in the direction of locking through the 'R' section and into the 'O' section.
   ↳ The dead bolt extends. There is no restore force in the 'O' section.

3. Move the thumb-turn slightly over the threshold between the 'O' and 'R' section in the same direction of rotation.
   ↳ The dead bolt will extend. The restore force must turn the thumb-turn automatically from this point as far as the 'U' section if it is released.
   ↳ If the thumb-turn does not automatically rotate as far as the 'U' section, either the fastening screw has been tightened too firmly or the locking device has been aligned incorrectly. The test is to be repeated after the fault has been eliminated. A fastening screw which has been tightened too firmly acts as a brake on the restoring force mechanism.

4. Lock the door and check that the locking device functions correctly by pressing the door fitting or panic bar in the direction of escape.
   ↳ The dead bolt must spring back and it must be possible to open the door easily.
   ↳ If the dead bolt does not draw back when the handle is turned or the door fitting catches, either the locking cylinder or the locking device is incorrectly aligned or defective. The test is to be repeated after the fault has been eliminated as described above.

Please contact the lock manufacturer if you are unable to ensure that the locking device functions correctly after the functional test.

### 6.3.3 Half Cylinder DK/MR

The thumb-turn, including the inside tube, can be removed from the cylinder housing to install the DK and MR versions. The procedure is described below. It is only necessary for key switches, for example, if the half cylinder cannot be installed using the fastening screw.

### 6.3.3.1 Disassembly
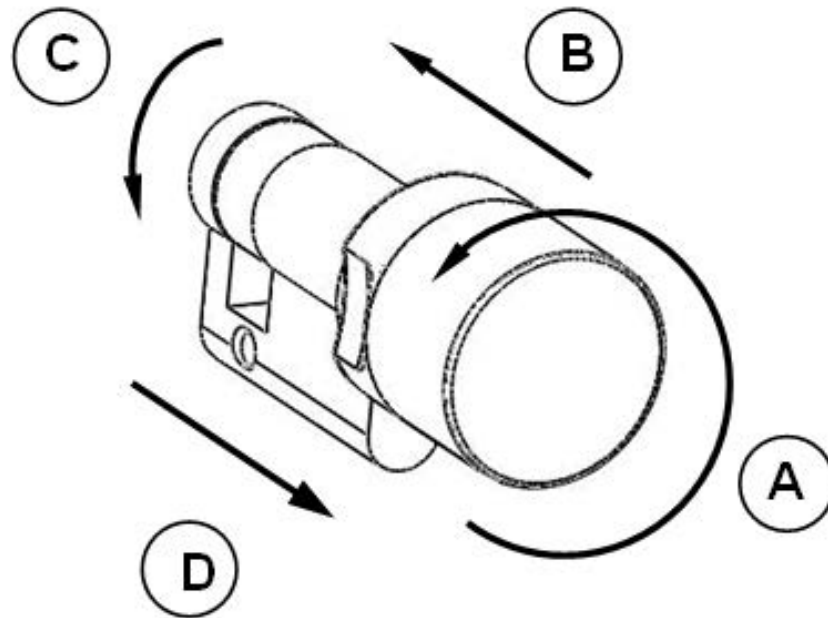


If you need to disassemble the half cylinder, please proceed as follows:

1.  Using a tool such as a screwdriver, grip into the two slots in the plastic disc between the thumb-turn and the profile cylinder housing and turn the tool while applying a little pressure. This breaks the disc.
2.  Remove the remains of the plastic disc.
3.  Engage the half cylinder using an authorised ID medium.
4.  While the thumb-turn is engaged, turn it anti-clockwise until it will turn no more (e.g. towards the lock when installed or holding the cam with your hand when not installed; see Step A in the diagram).
5.  Press thumb-turn towards profile cylinder housing until it stops (you will hear it click. If necessary, move thumb-turn backwards and forwards several times until you hear a click; see Step B and D in the diagram).
6.  If needed, engage the half cylinder once more using an authorised ID medium.
7.  While the thumb-turn is engaged, turn it anti-clockwise and apply pressure against the stop position (see Step B and D in the diagram).
8.  While applying pressure, pull the thumb-turn (including inside tube) from the profile cylinder (see Step D in the diagram).

| **NOTE** |
| :--- |
| You must not strike the thumb-turn during installation. Do not allow the cylinder to come into contact with oil, paint or acids. |

6.3.3.2  Installation

1. Remove the metal discs on the inside tube and push a plastic disc onto it instead. You will find the plastic disc in the supplied package.
2. Push the removed metal discs onto the inside tube, so that a plastic disc and a varying number of metal discs, depending on the half cylinder type, are on the inner tube.
3. Push the inner tube thumb-turn into the profile cylinder housing until it stops.
4. Engage cylinder using an authorised ID medium.
5. While the thumb-turn is engaged, press it gently against the profile cylinder housing while turning clockwise at the same time until the inside tube clicks into place in the profile cylinder housing.

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**NOTE**

Check that it has locked into position correctly by pulling the thumb-turn gently while turning it backwards and forwards.

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**NOTE**

You will find the required plastic discs in the supplied package.

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When installing, ensure that only one plastic disc and the same number of metal discs are on the inner tube as when you took it apart. The plastic disc must be placed directly on the thumb-turn.

6.3.3.3  Functions test

1. Engage half cylinder using a valid ID medium and turn the thumb-turn in the locking and opening direction with the door open. The thumb-turn must be able to rotate easily when you do so.
2. Close the door and repeat the process. If the half cylinder should be stiff, you need to align the door or modify the strike plate.

This generally also applies when installing the cylinder in a key switch, for example.

### 6.3.4  Installing Swiss Round

Both cylinders and a fitting need to be removed from doors when installing a Swiss round cylinder.

The inside thumb-turn is removed and re-fitted in the same way as Half Cylinder DK / MR.

1.  Disassemble inside thumb-turn and outside thumb-turn. Remove a fitting from the door.
2.  Push cylinder into the profile and fasten with the fastening screw.
3.  Fit inside thumb-turn and outside thumb-turn. Mount fitting again.

## 7. SmartIntego audible signals

The can emit an audible signal to indicate its status or an authorisation. The system integrator can programme the audible signals as required to indicate each different event.

## 8. Battery warnings

### 8.1 SI online battery warning

▪▪ Online via the system

In SmartIntego Online, a low battery status is signalled to the system by a designated bit when a booking (locking device event or 'Get status') is made. The system integrator must take this bit into account – by creating suitable warnings, for example – to prevent SI-Locking Cylinder from discharging completely.

It can take up to 24 hours before the SI-Locking Cylinder resets the battery warning after a battery replacement.

▪▪ On site at the locking device

It is also possible to use the SmartIntego tool to programme a battery replacement card. If you hold this card up to the card reader on the locking device, an internal resistance test is performed immediately, serving as a battery test. The warning on the locking device is immediately reset if the batteries have been replaced after a battery warning and a battery replacement card is used to complete an internal resistance test on the locking device concerned.

In this case, no freeze mode or escalation levels are created, only information transmitted by the 'Event' or 'GetStatus' (such as a warning or alarm), which the ACP needs to evaluate.

### 8.2 SI offline battery warning

*This offline function is expected to be available from 2016.*

▪▪ Warning Level 1:

Low batteries: 8 short audible signals + LED flashes red briefly 8 times before engaging. Batteries will soon be empty. Replace batteries in the SmartHandle.

▪▪ Warning Level 2:

Extremely low batteries: 8 short audible signals 30 seconds long + LED flashes red twice briefly with one second pause between each one during 30 seconds Emergency battery warning: batteries are almost completely empty. Replace the batteries in the SI-Locking Cylinder immediately.

▪▪ Once Warning Level 2 has been emitted for the first time, the cylinder can be opened a maximum of 50 more times.

▪▪ After reaching this number of opening operations or after about 4 weeks, the SI-Locking Cylinder automatically switches to freeze mode. Once at this warning level, SmartHandle can now only be activated

using a battery replacement card and an authorised ID medium (to open the door + replace the batteries). Once the batteries are replaced, the SI-Locking Cylinder needs to read the battery replacement card again.

You need to add/programme a valid card associated with the locking system concerned. This is a special card which eliminates 'Freeze mode' on the locking device. An authorised ID medium is always required when you wish to open the door and replace the battery. You need to have programmed this special card with the **T-ID 7**. T-ID 7 is a special system ID, which the system integrator must create.

## 9. Battery replacement in SmartIntego

### 9.1 General instructions

Only trained personnel may replace the batteries.

You must wear clean gloves made of cloth and free of fat or grease when replacing the batteries to prevent the batteries being contaminated by fingerprints. Fingerprints on batteries may reduce battery life considerably.

Only use batteries which have been approved by SimonsVoss.

**NOTE**

You may cause damage to the SI-Locking Cylinder if you reverse the polarity. The batteries used in this device may pose a fire or burn hazard if handled incorrectly. Do not recharge, open or burn batteries, or heat them to over 100° C.

**NOTE**

Dispose of lithium batteries properly immediately after they have discharged. Store them out of children's reach; do not open and do not throw into a fire. Always replace both batteries when changing batteries. Please note safety instructions.

The locking cylinder retains its status, programming and saved protocols even without power supply.

### 9.2 Battery life

The battery life is different for each individual locking cylinder configuration as power consumption varies when the cylinder is activated or a data connection is established.

| VERSION | STANDBY | NUMBER OF AC-TIVATIONS | NUMBER OF BATTERIES |
|---|---|---|---|
| Networked online | Up to 5 years | Up to 80,000 | 2 |
| Networked off-line (or in virtual network) | Up to 6 years | Up to 50,000 | 2 |

The specified battery life is for guidance only. A battery warning (if configured) is not emitted when the aforementioned battery life expires, but is based on the measured battery status instead.
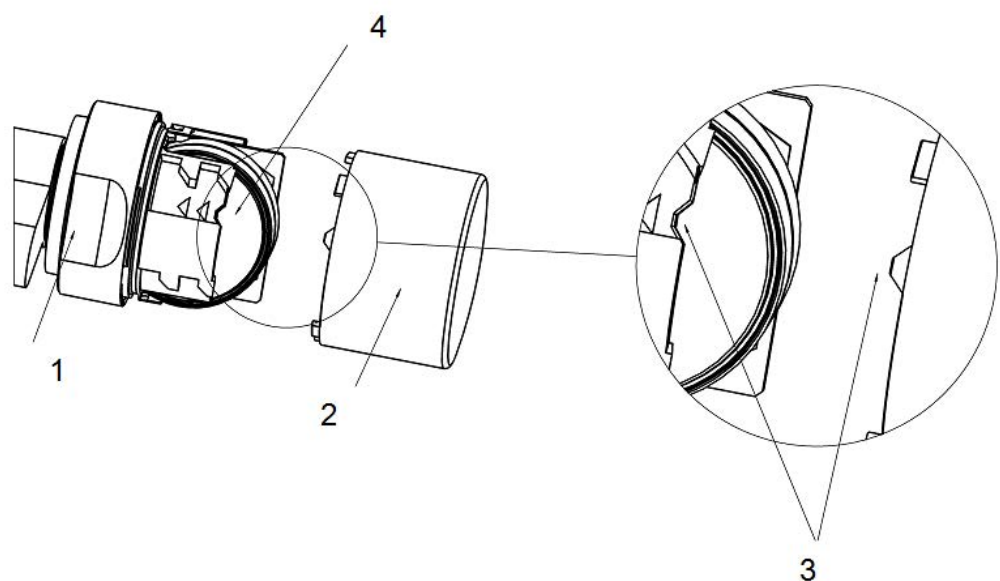
### 9.3 Procedure

1. Place the installation/battery key on the inside thumb-turn in such a way that the two teeth lock into the openings in the locking disc; if necessary, turn the thumb-turn until both teeth engage into the locking disc.

> **NOTE**
>
> The tool must be placed flat on the inside front surface of the recessed grip ring to ensure that the installation/battery key can engage into the locking disc.

2. Hold the inside thumb-turn firmly and carefully turn the installation/battery key about 30º in a clockwise direction (until you hear a click).
3. Remove installation/battery key from the thumb-turn.
4. Push recessed grip ring backwards towards the door, so that it comes away from the thumb-turn.
5. Hold recessed grip ring firmly and turn thumb-turn about 10º in an anti-clockwise direction and remove.
6. For MH cylinders only: Carefully fold antenna upwards.
7. Carefully remove both batteries from the holder.
8. Insert the new batteries into the holder at the same time with the positive poles next to each other; change the batteries as quickly as possible. Use clean gloves free of fat or grease to handle new batteries.



9. For MH cylinders only: Lock antenna back into place.

10. Replace the thumb-turn (align the triangle mark as in the diagram), hold the recessed grip ring firmly and fasten the inside thumb-turn by turning in a clockwise direction (about 10°). (Diagram may differ slightly from the purchased product)
11. Push recessed grip ring back onto the thumb-turn, so that the thumb-turn and ring close together in a flush fit.
12. Place the installation/battery key on the inside thumb-turn in such a way that the two teeth lock into the openings in the locking disc; if necessary, turn the thumb-turn until both teeth engage into the locking disc.
13. Close the thumb-turn again by turning it about 30° in a clockwise direction (until you hear a click).

Then activate an authorised ID medium and check that it functions.

## 10. Areas of use

### 10.1 General

The digital locking cylinder is compatible with locks for Euro profile cylinder as per DIN 18252 and EN1303.

### 10.2 Fire doors

As a general rule, this cylinder can be fitted into fire doors. However, you must check that it is actually approved for use in fire doors.

### 10.3 Doors along rescue routes

Type .AP should be installed for use in doors with an anti-panic function in which the position of the cam may have an effect on the lock's functioning. This must be specified in the lock manufacturer's approval. Also see industrial standards EN 179 and EN 1125 and the individual lock manufacturers' data sheets.

### 10.4 Installation outdoors

If you are unable to ensure that no water will come through the door, we recommend using the respective .WP versions. The outer thumb-turn is completely sealed in the anti-panic cylinder model and the whole cylinder is sealed in the double thumb-turn cylinder variant.

## 11. Networking

### 11.1 Networking Online

- Opening by enabling the ZK system (short activation) with variable time settings
- Permanent activation (On / Off)
- Deactivation | Activation
- "Whitelist" function with up to 250 offline cards
- Office mode
- Battery status transmission and QoS (Quality of Signal)
- Firmware update of locks via radio interface
- Read five different card setups
- „Integrator Lock"
- „Installer Lock"
- Autoconfiguration via SmartIntego Manager (only for TCP/IP GatewayNode variants)

### 11.2 Networking Offline (Virtual networking)

- Assignment of rights (access)
- Battery status
- Blacklist transfer incl. feedback
- Walkthrough lists
- Time budget / ExpiryDate
- Deleting data at the online terminal
- Initial programming possible via online reader of the ZK manufacturer

## 12. 'SmartIntego' accessories

### 12.1 Core protection adapter Z4.MP.KA.SET

The core protection adapter Z4.MP.KA.SET is available for the .

### 12.2 Tool

In addition to the installation tool, a battery replacement key is also included in the supply package. You can use this tool to install or remove outside thumb-turns and replace batteries.

### 12.3 Battery set

A new set of batteries can be ordered, which contains ten CR2450 batteries. Only ever use batteries approved by SimonsVoss.

## 13. 'SmartIntego' data sheets

### Radio emissions

| 13.564 MHz – 13.564 MHz | -19.57 dBμA/m (10 m distance) |
|---|---|
| 868.000 MHz – 868.600 MHz / 869.700 MHz – 870.000 MHz<br><br>Only for item numbers: SI.Z4.*MI* | <25 mW ERP |

### 13.1 Locking cylinder

#### Profile cylinder

| Basic length: | Outside 30 mm, internal 30 mm (AP/WP 35mm) |
|---|---|

Installation lengths in 5 mm increments, overall length up to 140 mm (max. 90 mm on one side); special lengths on request.

#### Batteries

| Type: | CR, 2450, 3 V |
|---|---|
| Manufacturer: | Murata, Panasonic |
| Quantity: | 2 units |
| Battery life: | SmartIntego Wireless Online (WO):<br><br>▪ Up to 5 years<br><br>▪ Up to 80,000 activations<br><br>Card SmartIntego Virtual Card Network (SVCN):<br><br>▪ Up to 6 years<br><br>▪ Up to 50,000 activations |

#### Ambient conditions

| Operating temperature: | -25ºC to +65ºC |
|---|---|
| Protection class: | Standard protection rating IP54 (when installed); .WP variant: IP 66 |
| Air humidity: | < 95%; non-condensing |

### Online networking
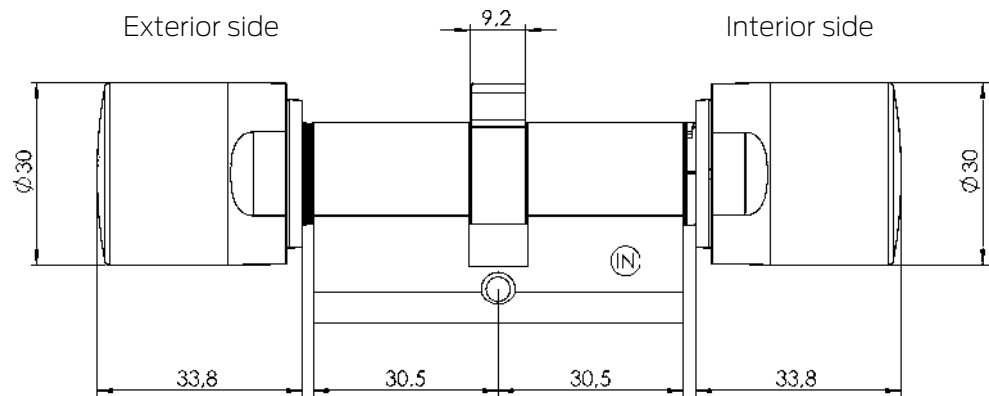
- Opened after release by access control system(short release interval) with variable time settings
- Permanent release (on/off)
- Activation | Deactivation
- White List function with up to 250 offline cards
- Access list with up to 250 entries (overwritten on a rolling basis)
- Office mode
- Battery status transmission and QoS (quality of signal)
- Firmware update for locking devices via wireless interface
- Reads 5 different card set-ups
- 'Integrator lock'
- 'Installer lock'
- Auto-configuration via SmartIntego Manager (in TCP/IPGatewayNode models only)

### Offline networking (virtual networking)

- Issue of rights (access)
- Battery status feedback
- Blacklist transfer, including feedback signal
- Access list with up to 1,000 entries (overwritten on a rolling basis)
- Time budget / expiry date
- Data deletion on online terminal
- Initial programming possible usingaccess control manufacturer's online reader

## 13.2  Half cylinder

### Thumb-turns

| Material: | Stainless steel |
|-----------|-----------------|
| Colours: | Stainless steel, brushed |
| Diameter: | 31 mm |
| Length: | 37 mm (from front surface of pro-file) |

### Profile cylinder

| Basic length: | outside 30 mm, internal 10 mm |
|---|---|

Installation lengths in 5 mm increments (no installation kit) an overall length of up to 100 mm with a maximum length of 90 mm on the outer side of the cylinder. Greater lengths on request.

### Batteries

| Type: | CR, 2450, 3 V |
|---|---|
| Manufacturer: | Murata, Panasonic |
| Quantity: | 2 units |
| Battery life: | Up to 5-6 years |

### Ambient conditions

| Operating temperature: | -25ºC to +65ºC |
|---|---|
| Protection class: | Standard protection rating IP54 (when installed); .WP variant: IP66 |
| Air humidity: | <95%: non-condensing |

### Cam HZ.SL

| Cam position handle: | 37º |
|---|---|
| Cam width from neutral position: | 11 mm |

## 13.3  Dimensional drawings cylinder

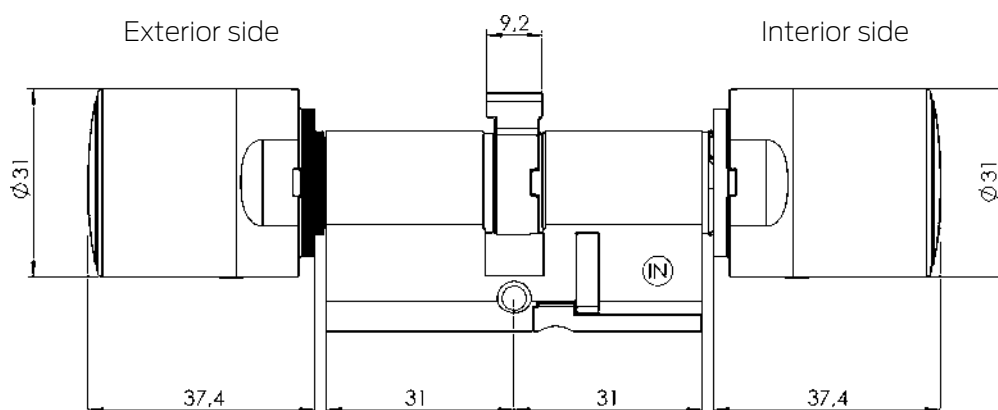### Comfort - Passive (CO MP)
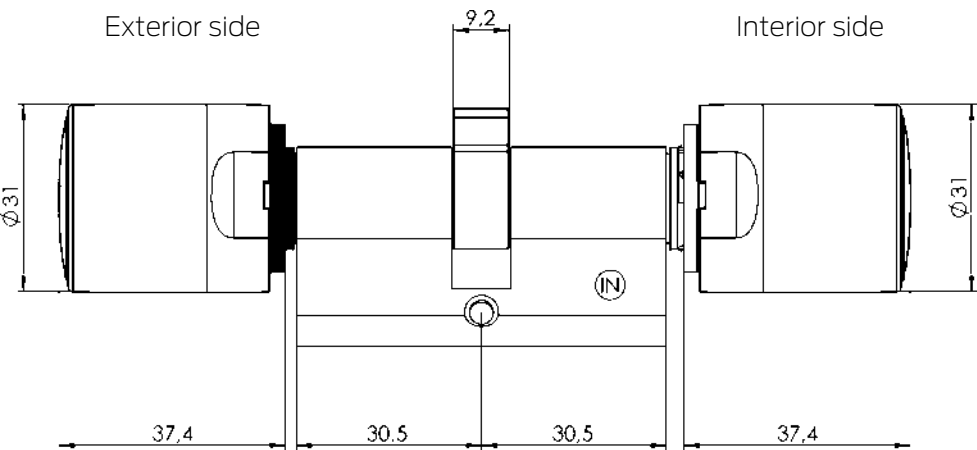
### Freely rotating - Active (FD)

Exterior side        Interior side

Ø 30    9,2    Ø 30

33,8    30,5    30,5    33,8

### Freely rotating - Passive/hybrid (FD MP/MH)

Exterior side        Interior side

Ø 30    9,2    Ø 31

37    30,5    30,5    37,4
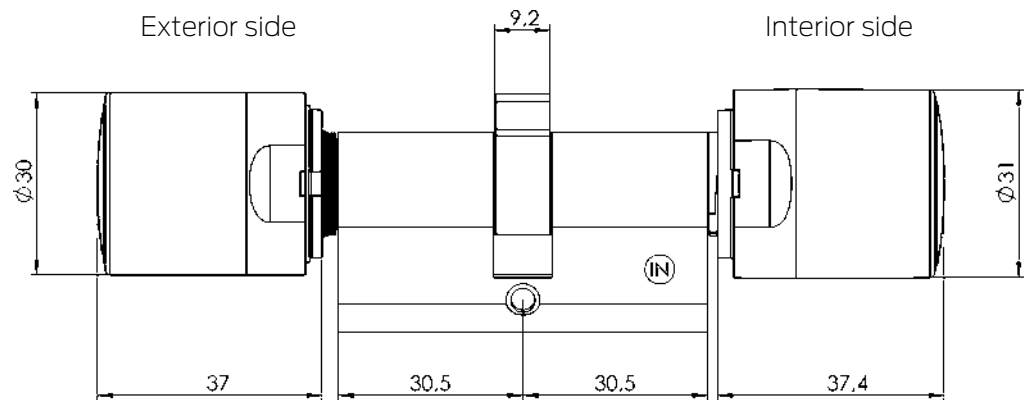
### Half Cylinder - Passive (HZ MP)

Ø 31    9,2

37,4    30,5    11
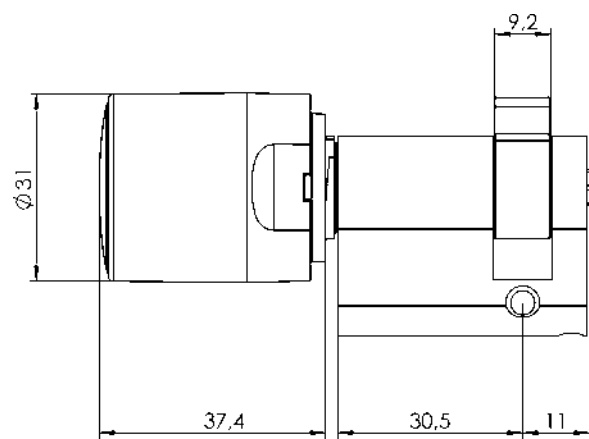
### Anti-panic Free rotating - passive (AP2 FD MP)

Exterior side

9,2

Interior side

Ø31

Ø31

37,4 — 31 — 31 — 37,4

### Anti-panic Reader on both sides - Passive (AP2 BL MP)

Exterior side

9,2

Interior side

Ø30

Ø31

37 — 31 — 31 — 37,4
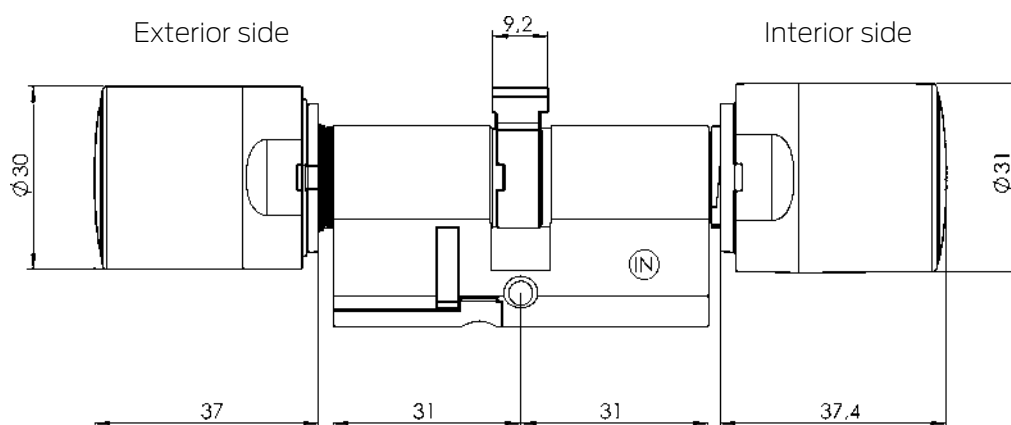
### Scandinavian Oval - Passive (SO MP)

Ø31

Ø17,8

35

37,4 — 41,3 — 8,2
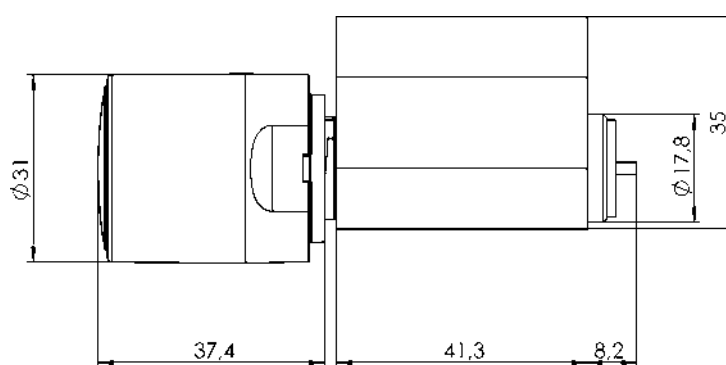
## Scandinavian Round - Passive (RS MP)
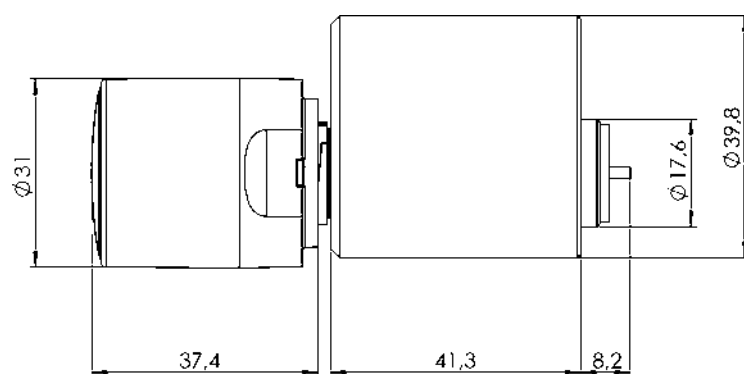


## Swiss Round Comfort - Passive (SR CO MP)
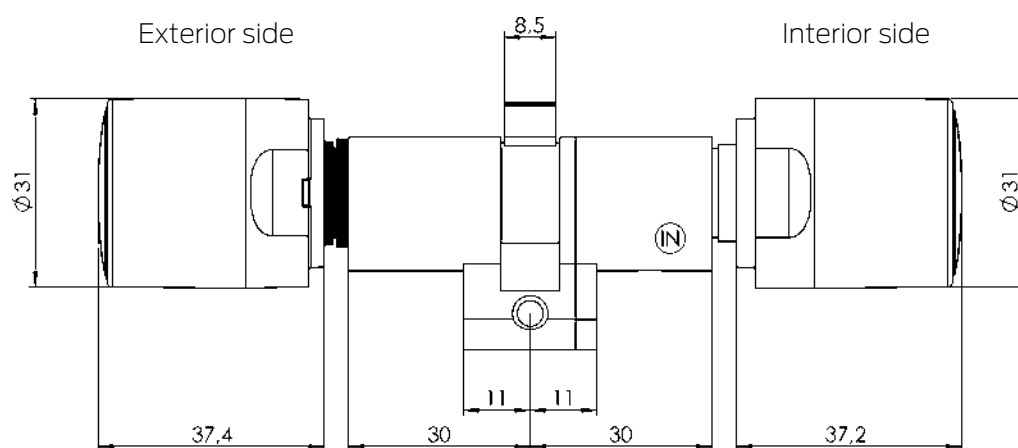
## 14. Maintenance, cleaning and disinfection

> **NOTE**
>
> Digital locking cylinders MUST not come into contact with oil, grease, paint or acids.

> **NOTE**
>
> The use of unsuitable or aggressive disinfectants can damage the locking cylinder.
>
> Clean the locking cylinder if necessary with a soft, moist cloth.
>
> Only use disinfectants explicitly suitable for the disinfection of sensitive metal surfaces and plastic.

> **NOTE**
>
> **HZ.SL:** *It is recommended to grease the latching edge on the electrical enclosure lever handle.*

Empty batteries always must be replaced by new ones approved for use by SimonsVoss. Dispose of old batteries in the proper manner.

Carry out a new functional test after changing the batteries in anti-panic cylinders.

## 15. Declaration of conformity

The company SimonsVoss Technologies GmbH hereby declares that the articles (SI.Z4.*M*, SI.Z4.*MI*) comply with the following guidelines:

■■ 2014/53/EU –RED–
or for the UK: UK statutory 2017 No. 1206 –Radio equipment–

■■ 2011/65/EU –RoHS–
or for the UK: UK statutory 2012 No. 3032 –RoHS–

$C \in$ UK CA

The full text of the EU Declaration of conformity is available at the following internet address: *www.simons-voss.com/en/certificates.html*.
The full text of the UK Declaration of conformity is available at the following internet address: *www.simons-voss.com/en/certificates.html*.

## 16. Help and other information

### Information material/documents

You will find detailed information on operation and configuration and other documents on the website:

*https://www.smartintego.com/int/home/infocenter/documentation*

### Declarations of conformity

You will find declarations of conformity and other certificates on the website:

*https://www.simons-voss.com/en/certificates.html*

### Information on disposal

- Do not dispose the device (SI.Z4.*M*, SI.Z4.*MI*) in the household waste. Dispose of it at a collection point for electronic waste as per European Directive 2012/19/EU.
- Recycle defective or used batteries in line with European Directive 2006/66/EC.
- Observe local regulations on separate disposal of batteries.
- Take the packaging to an environmentally responsible recycling point.

### Technical support

Our technical support will be happy to help you (landline, costs depend on provider):

+49 (0) 89 / 99 228 333

### Email

You may prefer to send us an email.

*si-support-simonsvoss@allegion.com*

### FAQs

You will find information and help in the FAQ section:

*https://faq.simons-voss.com/otrs/public.pl*

## Address

SimonsVoss Technologies GmbH
Feringastr. 4
D-85774 Unterfoehring
Germany

## This is SimonsVoss

SimonsVoss, the pioneer in remote-controlled, cable-free locking technology provides system solutions with a wide range of products for SOHOs, SMEs, major companies and public institutions. SimonsVoss locking systems combine intelligent functionality, high quality and award-winning design Made in Germany.

As an innovative system provider, SimonsVoss focuses on scalable systems, high security, reliable components, powerful software and simple operation. As such, SimonsVoss is regarded as a technology leader in digital locking systems.

Our commercial success lies in the courage to innovate, sustainable thinking and action, and heartfelt appreciation of employees and partners.

SimonsVoss is a company in the ALLEGION Group, a globally active network in the security sector. Allegion is represented in around 130 countries worldwide (www.allegion.com).

### Made in Germany

SimonsVoss is truly committed to Germany as a manufacturing location: all products are developed and produced exclusively in Germany.